



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,767	01/10/2002	Mark Andrew Mattox	024016.43014	8331

22428 7590 10/24/2002

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
----------	--------------

1746

DATE MAILED: 10/24/2002

S

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/044,767

Applicant(s)

MATTOX, MARK ANDREW

Examiner

Sharidan Carrillo

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 02. 6) ☐ Other:

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 5, 9, and 13 are indefinite because it is unclear what one of ordinary skill in the art would consider as a quantity "at least sufficient" to complex the iron sulfide. Claims 1 and 5 are indefinite because it is unclear what one of ordinary skill in the art would consider as "dry gas" and/or a "dry gas pipeline". Claims 1 and 5 are indefinite because it is unclear whether the pipeline is being treated online or off-line with the composition. Specifically, it is unclear whether the pipeline is operational with dry gas or processed fluid as the composition is added to the pipeline to complex the iron sulfide. Further, claims 1, 5, 9, and 13 are further indefinite because the claim does not positively recite the pipeline having iron sulfide therein. Claims 9 and 11 are indefinite because it is unclear what one of ordinary skill in the art would consider as a "processed fluid" or a "processed fluid pipeline".

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1746

4. Claims 1, 3-4, 9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Larsen et al. (Corrosion 2000, pages 1-18).

Larsen et al. teach treating an oil well with tetrakis(hydroxymethyl)phosphonium sulfate (THPS) and ammonium ions to dissolve iron sulfide by forming a complex as shown in Fig. 16, and described on pages 17. In view of the indefiniteness of the term, "dry gas pipeline", the limitations are inherently met for the following reasons. Page 1 recites that the Skjold oil field produces both oil and gas. Page 2, further discusses the production of oil, water, and gas, with respect to the Skjold Field. Page 5 teaches that THPS has been applied to the Skjold field. Page 7 teaches further teaches that the Skjold Field produces gas. Page 7 states that hydrogen sulfide in the gas was well as hydrogen sulfide in the water. Page 17 states that following the THPS trials, pipework inspection has shown that significant FeS removal has already occurred in pipes downstream of the THPS dosing point. In summary the limitations of "dry gas pipeline" is met by the teachings of Larsen et al. because Larsen et al. teach hydrogen sulfide and gas produced in the pipeline. Additionally, in view of the indefiniteness, the limitation of "dry gas pipeline" would be met since it is unclear whether the pipeline contains dry gas and further what one of ordinary skill in the art would consider as a "dry gas". In reference to the term "processed fluid pipeline", the limitation would be met by Larsen since a fluid by definition can be a gas or liquid, and Larsen et al. teach the oil field producing both oil, gas, with water present. In reference to claims 2 and 11, refer to page 7 which teaches long term batch treatment with THPS for 6 days. In reference to the limitations of claims 4 and 12, refer to page 10, which teaches Pulse Treatment for 6 minutes every 2 hours.

Art Unit: 1746

5. Claims 9-10 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Odell et al. (WO00/21892).

6. Odell et al. teach treating ferrous sulphide deposits in oil wells with aqueous tetrakis (hydroxymethyl) phosphonium salts and ammonium salts, as described in page 1. Page 2 teaches that the salt may be sulphate or chloride. In reference to claims 9 and 13, and in view of the indefiniteness of the term "processed fluid pipeline", the limitations would inherently be met by Odell et al. since Odell et al. teach treating oil wells. In reference to claims 10 and 14, refer to page 2, line 25.

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen et al. (Corrosion 2000, pages 1-18).

Art Unit: 1746

Larsen et al. fail to specifically recite 5% by weight. However, on page 17, Larsen et al. teach using various concentrations of THPS to dissolve iron sulfide. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the concentration of THPS as needed depending upon the FeS deposits present, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claims 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odell et al. (WO00/21892).

Odell et al. teach the invention substantially as claimed with the exception of adding the composition intermittently or continuously to the pipeline. On page 5, line 25, Odell et al. teach that the solution was dosed in the oil well at a rate equivalent to 100ppm. It would have been within the level of one of ordinary skill in the art to have adjusted the rate at which the solution is dosed in the oil well depending upon the amount of ferrous sulphide deposits present.

***Allowable Subject Matter***

11. Claims 5-8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of Odell et al. fail to teach treating a dry gas pipeline with water, tetrakis(hydroxymethyl)phosphonium chloride and ammonium salt to complex the iron sulfide present in the pipeline.

13. In an interview with Mr. Steve Reid on 10/18/02, the examiner discussed the allowable subject matter. However, an agreement could not be reached.

Art Unit: 1746

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 703-308-1876.

The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 703-308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7719 for regular communications and 703-305-7719 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Sharidan Carrillo  
Primary Examiner  
Art Unit 1746

bsc  
October 19, 2002



**SHARIDAN CARRILLO**  
**PRIMARY EXAMINER**